



Rio Grande Silvery Minnow *Questions and Answers*

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INDEX OF QUESTIONS

1. What is the Rio Grande silvery minnow?
2. Where is the Rio Grande silvery minnow found?
3. What are the threats to the Rio Grande silvery minnow?
4. What areas are being proposed as critical habitat?
5. Who owns the river channel and the 300 foot riparian areas in the proposal?
6. The critical habitat designation includes 300 feet. on either side of the rivers. Does that include everything or are some areas excluded?
7. What actions led to proposing critical habitat for the Rio Grande silvery minnow?
8. What is critical habitat?
9. Will water flows in the Rio Grande be affected?
10. What are the water flow requirements for the Silvery Minnow?
11. What steps would be taken if the river exhibits prolonged periods of low or no flow within areas of critical habitat?
12. Are there currently any rescue programs for the silvery minnow during periods when the river exhibits low or no flow?
13. How does a critical habitat designation affect private, state or tribal lands?
14. What will be the impact of the designation on public use of Federal lands?
15. Does the Fish and Wildlife Service evaluate all projects in critical habitat areas?
16. How did the Fish and Wildlife Service decide what areas to include in the proposed critical habitat for the Rio Grande silvery minnow?
17. What specific elements are present to constitute critical habitat for the Rio Grande Silvery Minnow?
18. Why is a riparian area adjacent to the river being included?
19. How will the adjacent riparian area affect landowners?
20. What counties are in the proposed critical habitat designations?
21. Why are the two other river reaches, which have suitable habitat for the minnow, not being proposed as critical habitat?
22. What is an experimental population?
23. More questions?

1. What is the Rio Grande silvery minnow?

The Rio Grande silvery minnow is one of seven species in the genus Hybognathus found in the United States. The species was first described by Girard (1856) from specimens taken from the Rio Grande near Fort Brown, Cameron County, Texas. It is a stout silvery minnow with moderately small eyes and a small mouth. Adults may reach 3.5 inches in total length.

2. Where is the Rio Grande silvery minnow found?

This species was historically one of the most abundant and widespread fishes in the Rio Grande Basin, occurring from Española, New Mexico, to the Gulf of Mexico, Texas. It was also found in the Pecos River, a major tributary of the Rio Grande, from Santa Rosa, New Mexico, downstream to its confluence with the Rio Grande. The silvery minnow is completely extirpated from the Pecos River and from the Rio Grande downstream of Elephant Butte Reservoir and upstream of Cochiti Reservoir. The current distribution of the silvery minnow is limited to the Rio Grande between Cochiti Dam and Elephant Butte Reservoir.

3. What are the threats to the Rio Grande silvery minnow?

Throughout much of its historical range, the silvery minnow's decline has been attributed to decreased and interrupted stream flows caused by impoundments, water diversion for agriculture and stream channelization. The species may also be affected by interactions with non-native fish and decreasing water quality in its native streams. It is believed that diversion dams on the middle Rio Grande act as barriers and prevent the silvery minnow from movement upstream of the diversion dams. Historically, after periods of low or no flow the silvery minnow may have been able to repopulate downstream habitat the following year by the drift of eggs from upstream populations. However, when the present-day middle Rio Grande dries and dams prevent upstream movement, the silvery minnow can become trapped in some areas and die in isolated pools before the river becomes wetted again. The inability of the population to find adequate refugia during prolonged periods of low or no flow and to repopulate extirpated reaches creates a very unstable population.

4. What areas are being proposed as critical habitat?

The silvery minnow presently occurs only in the Rio Grande from Cochiti Dam, Sandoval County, downstream to the headwaters of Elephant Butte Reservoir, Sierra County, New Mexico, approximately 5 percent of its known historic range. The proposed critical habitat unit is within the middle Rio Grande from immediately downstream of Cochiti Reservoir to the Elephant Butte Reservoir Dam, including the tributary Jemez River from Jemez Canyon Reservoir to its confluence with the Rio Grande. The proposed critical habitat designation defines the lateral extent (width) as those areas bounded by existing levees or in areas without levees the lateral extent of critical habitat is proposed to be defined as 91.4 meters (300 feet) of riparian zone adjacent to each side of the middle Rio Grande. The area inundated by Elephant Butte Reservoir does not provide those physical or biological features essential to the conservation of the species and is specifically excluded by definition from the proposed critical habitat.

5. Who owns the river channel and the 300 foot riparian areas in the proposal?

Most of the land in the middle Rio Grande valley that abuts the proposed critical habitat unit is within the administrative boundaries of the Middle Rio Grande Conservancy District. The Middle Rio Grande Conservancy District is a political subdivision of the State of New Mexico that provides for irrigation, flood

control, and drainage of the Middle Rio Grande valley in New Mexico. The District's operations extend from Cochiti Dam downstream 150 mi (285 km) to the northern boundary of the Bosque del Apache National Wildlife Refuge. Within these 150 miles are also the lands of the communities of Algodones, Bernalillo, Rio Rancho, Corrales, Albuquerque, Los Lunas, Belen, Socorro, and a number of smaller incorporated and unincorporated communities. Other landowners, sovereign entities, and managers include: the Pueblos of Cochiti, Santo Domingo, San Felipe, Santa Ana, Sandia, and Isleta; the Bureau of Reclamation (BOR); the Service; the U.S. Bureau of Land Management (BLM); New Mexico State Parks Division; New Mexico Department of Game and Fish; New Mexico State Lands Department; and the Corps. Approximately 45 river miles of our proposed critical habitat run through Pueblo lands, including those of the Cochiti, Santo Domingo, San Felipe, Santa Ana, Sandia, and Isleta Pueblos.

6. The critical habitat designation includes 300 feet on either side of the Jemez river and Rio Grande. Does that include everything or are some areas excluded?

Some lands within the critical habitat designation boundaries are excluded by definition. These include existing paved roads, bridges, parking lots, dikes, levees, diversion structures, railroad tracks, railroad trestles, water diversion canals outside of natural stream channels, active gravel pits, cultivated agricultural land, and residential, commercial, and industrial developments. However, if activities that are federally funded, authorized, or carried out in these areas may affect the primary constituent elements of the proposed critical habitat, these activities may be affected by the critical habitat designation.

The proposed critical habitat designation defines the lateral extent as those areas bounded by existing levees or in areas without levees the lateral extent of critical habitat is proposed to be defined as 91.4 meters (300 feet) of riparian zone adjacent to each side of the middle Rio Grande. Thus, the lateral extent of proposed critical habitat does not include areas adjacent to the existing levees but within the 300-foot lateral width outside the existing levees (i.e., these areas are not proposed as critical habitat, even though they may be within the 300-foot lateral width). We recognize that these areas can be important for the overall health of river ecosystems, but these areas have almost no potential for containing the primary constituent elements because they are protected from the levees and are rarely inundated by water. Therefore, they are specifically excluded from the proposed designation because we conclude they are not essential to the conservation of the silvery minnow.

7. What actions led to proposing critical habitat for the Rio Grande silvery minnow?

On November 21, 2000, the United States District Court for the District of New Mexico, in Middle Rio Grande Conservancy District v. Babbitt, Civ. Nos. 99-870, 99-872, 99-1445M/RLP (Consolidated) set aside the July 9, 1999, critical habitat designation and ordered us to issue both an EIS and a new proposed rule designating critical habitat for the silvery minnow within 120 days. This proposed rule and the draft EIS are being issued pursuant to that order.

8. What is critical habitat?

Critical habitat is defined as areas of land and water with physical and biological features essential to the conservation of a threatened or endangered species, and which may require special management considerations or protection. A critical habitat designation requires all Federal agencies to consult with the Fish and Wildlife Service on any project they fund, authorize or carry out that may affect critical habitat. The Federal agency analyzes their project to determine whether it will affect listed species or designated critical habitat. If the Federal agency determines that the project will affect listed species or designated

critical habitat, the agency asks the Service to review its action. For critical habitat, projects proposed for state-owned, tribal or private lands are evaluated only if they involve a Federal permit or license, are funded by Federal money, or require some other form of Federal involvement. The Service can then recommend ways to minimize any adverse effects.

9. Will water flows in the Rio Grande be affected?

In recent formal consultations, we have worked with Federal agencies to target flows for the Rio Grande silvery minnow and intensively manage and closely monitor the water in middle Rio Grande. Any Federal agency whose actions influence water quantity or quality in a way that may affect proposed critical habitat or the silvery minnow must enter into section 7 consultation. Still, these consultations cannot result in restrictions that are outside an action agency's legal authority and jurisdiction. We do not expect that target flows will differ from those already provided in past consultations.

10. What are the water flow requirements for the Silvery Minnow?

The silvery minnow does not need a large quantity of water to survive but it does need a sufficient amount of flowing water to reduce prolonged periods of low or no flow and minimize the formation of isolated pools. The identification of primary constituent elements for the silvery minnow is not intended to create a high-velocity, deep flowing river, with a bank-to-bank flow. The silvery minnow does not require such habitat characteristics. Instead, the silvery minnow requires habitat with sufficient flows through the irrigation season to avoid prolonged periods of low or no flow; additionally, a spike in flow in the late spring or early summer to trigger spawning, and a relatively constant winter flow are also required.

11. What steps would be taken if the river exhibits prolonged periods of low or no flow among areas of critical habitat?

The Service would likely evaluate whether the adverse effects of a prolonged period of low, or no flow is of sufficient magnitude (e.g. length of the river) and duration that it would appreciably diminish the value of the critical habitat unit for the survival and recovery of the silvery minnow. If this determination is made, the Service will work with affected parties to minimize impacts of low or nonexistent flows on minnow populations.

12. Are there currently any rescue programs for the silvery minnow during periods when the river exhibits low, or no flow?

The Service closely monitors low flow or river drying events on the Rio Grande. We work with the U.S. Bureau of Reclamation and the U.S. Army Corps of Engineers to monitor potential low flow conditions with sufficient lead time to ensure an adequate response time for silvery minnow rescue efforts. If necessary, silvery minnows are rescued and relocated from isolated pools.

13. How does a critical habitat designation affect private, state or tribal lands?

As analyzed in our economic analysis, we do not anticipate that property values will be affected by critical habitat designation. Land or water owners will continue to have the opportunity to utilize their water or private property rights within the proposed critical habitat units. For example, in 1996-2001, officials leased water to supplement instream flow in the Rio Grande to benefit the silvery minnow. The water was voluntarily leased from willing sellers, and we expect that supplemental water will continue to be leased

voluntarily. This rule will not change the appropriation of water rights within the area proposed to be designated as critical habitat.

A critical habitat designation requires only Federal agencies to consult with the Fish and Wildlife Service on any of the actions they fund, authorize or carry out that may affect critical habitat. The Service can then recommend ways to minimize any adverse effects. Critical habitat applies to activities of Federal agencies or to projects proposed on private, state-owned or tribal lands only if they involve a Federal agency through either permits, funding, or some other mechanism. Private landowners taking actions on their property that do not involve Federal permits, funding or authorization are not affected by a critical habitat designation. In most cases, projects that do have Federal involvement have been allowed to proceed with minor modifications designed to avoid impacts to listed species or designated critical habitat

14. What will be the impact of the designation on public use of Federal lands?

If this proposed rule is finalized, section 7(a)(2) of the Act would require that Federal agencies ensure that actions they fund, authorize, or carry out are not likely to result in the destruction or adverse modification of critical habitat. To destroy or adversely modify means that the activity has long-term implications; it appreciably diminishes the value of critical habitat for the survival and recovery of a listed species. However, if the Service make a determination that a project is likely to adversely modify critical habitat, in most cases reasonable and prudent alternatives can be found that allow the project to proceed with some modifications.

15. Does the Fish and Wildlife Service evaluate all projects in critical habitat areas?

No. The Federal agency conducting the activity must first analyze the project and determine if critical habitat will be affected. If so, the agency requests a consultation with the Fish and Wildlife Service. Projects are evaluated only when a Federal agency believes its action may affect the designated critical habitat.

16. How did the Fish and Wildlife Service decide what areas to include in the proposed critical habitat for the Rio Grande silvery minnow?

In determining which areas to propose as critical habitat, the Service is required to base critical habitat designation on the best scientific and commercial data available and to consider those physical and biological features (primary constituent elements) that are essential to the conservation of the species. Such general habitat criteria include, but are not limited to: space for individual and population growth, and for normal behavior; food, water, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, or rearing of offspring; and habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.

17. What specific elements were determined need be present to constitute critical habitat for the Rio Grande Silvery Minnow?

1. A hydrologic regime that provides sufficient flowing water with low to moderate currents capable of forming and maintaining a diversity of aquatic habitats, such as, but not limited to: backwaters (a body of water connected to the main channel, but with no appreciable flow), shallow side channels, pools (that portion of the river that is deep with relatively little velocity compared to the rest of the channel), eddies (a pool with water moving opposite to that in the river channel), and runs (flowing water in the river channel

without obstructions) of varying depth and velocity which are necessary for each of the particular silvery minnow life-history stages (e.g., the silvery minnow requires habitat with sufficient flows from early spring (March) to early summer (June) to trigger spawning, flows in the summer (June) and fall (October) that do not increase prolonged periods of low or no flow; and a relatively constant winter flow (November to February)) in appropriate seasons;

2. The presence of low velocity habitat (including: eddies created by debris piles, pools, or backwaters, or other refuge habitat (e.g., connected oxbows or braided channels)) within unimpounded stretches of flowing water of sufficient length (i.e., river miles) that provide a variation of habitats with a wide range of depth and velocities;

3. Substrates of predominantly sand or silt; and

4. Water of sufficient quality to maintain natural, daily, and seasonally variable water temperatures in the approximate range of greater than 1°C (35°F) and less than 30°C (85°F) and reduce degraded water quality conditions (decreased dissolved oxygen, increased pH, etc.).

18. Why is a riparian area adjacent to the river being included?

We believe a relatively intact riparian area, along with periodic flooding in a relatively natural pattern, are important in maintaining the stream conditions necessary for long-term survival and recovery of the silvery minnow. We selected the 300-foot lateral extent, rather than some other delineation, for three biological reasons: 1) the biological integrity and natural dynamics of the river system are maintained within this area; 2) conservation of the adjacent riparian area also helps provide essential nutrient recharge and protection from sediment and pollutants, which contributes to successful spawning and recruitment of silvery minnows; and 3) vegetated lateral zones are widely recognized as providing a variety of aquatic habitat functions and values and help improve or maintain local water quality.

19. How will the riparian area adjacent to the river affect landowners?

Some developed lands within the 300-foot lateral extent are not considered critical habitat because they are not essential to the conservation of the silvery minnow. Lands located within the exterior boundaries of the proposed critical habitat designation, but not considered critical habitat and are excluded by definition include: existing paved roads, bridges, parking lots, dikes, levees, diversion structures, railroad tracks, railroad trestles, water diversion canals outside of natural stream channels, active gravel pits, cultivated agricultural land, and residential, commercial, and industrial developments. These developed areas do not contain any of the primary constituent elements and do not provide habitat or biological features essential to the conservation of the silvery minnow, and generally will not contribute to the species' recovery. However, some activities in these areas (if Federally funded, authorized, or carried out) may affect the primary constituent elements of the proposed critical habitat and, therefore, may be affected by the critical habitat designation.

20. What counties are in the proposed critical habitat designations?

Critical habitat is proposed in the middle Rio Grande within Sandoval, Bernalillo, Valencia, and Socorro counties in New Mexico.

21. Why are the two other river reaches, which have suitable habitat for the minnow, not being

proposed as critical habitat?

Although we determine that a river reach in the lower Rio Grande in Big Bend National Park downstream of the park boundary to the Terrell/Val Verde County line, Texas, and a river reach in the middle Pecos River, New Mexico, from Sumner Dam to Brantley Dam in De Baca, Chaves, and Eddy Counties, New Mexico, are essential to the conservation of the silvery minnow, these areas are not proposed for critical habitat designation because of our preliminary analysis under section 4(b)(2). Our conservation strategy for the silvery minnow is to establish populations within its historic range under section 10(j) of the Act, and this could include all or portions of these stream reaches. At this time, the Service believes that these areas will contribute to the recovery of the silvery minnow, but anticipate excluding these stream reaches from the final designation of critical habitat. Consequently, these reaches are not proposed as critical habitat.

22. What is an experimental population?

As discussed in the Recovery Plan section of this rule, the primary goals of the silvery minnow Recovery Plan are to: 1) stabilize and enhance populations of the silvery minnow and its habitat in the middle Rio Grande valley; and 2) reestablish the silvery minnow in at least two other areas of its historical range (Service 1999). We believe that the best way to achieve the second recovery goal will be to use the authorities under section 10(j) of the Act, introducing experimental populations into the species historical range. Consequently, we have developed a conservation strategy that we believe is consistent with the species Recovery Plan. The conservation strategy is to reestablish the silvery minnow, under section 10(j) of the Act, within areas of its historical range, possibly including the river reach in the middle Pecos River and the river reach in the lower Rio Grande (both are described above). Since the silvery minnow is extirpated from these areas and natural repopulation is not possible without human assistance, use of a 10(j) rule is the appropriate tool to achieve this recovery objective.

The flexibility gained by establishment of a nonessential experimental population through section 10(j) would be of little value if there is a designation of critical habitat that overlaps it. This is because Federal agencies would still be required to consult with us on any actions that may adversely modify critical habitat. In effect, the flexibility gained from section 10(j) would be rendered useless by the designation of critical habitat. In fact, section 10(j)(2)(C)(ii)(B) of the Act states that critical habitat shall not be designated under the Act for any experimental population determined to be not essential to the continued existence of a species.

23. More questions?

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